

REMARKS

The Applicant provides the following comments with respect to various parts of the Office Action:

TITLE

The Office Action stated that the “title of the invention is not descriptive” and required a new title. Office Action at 2. Although the Applicant respectfully disagrees, the Applicant has amended the application to provide a new title in order to expedite prosecution of the application.

DRAWINGS

The Office Action further object to the drawings, stating that “they fail to show the drawings referring to prior art or conventional subject matter and the newly improved as applicant regards an invention as described in the specification.” Office Action at 2. The Applicant respectfully submits that it has complied with 37 C.F.R. § 1.83(a). If the Office disagrees, the Applicant respectfully requests identification of specific instances where the Applicant has failed to comply with section 1.83(a).

STATUS OF CLAIM 1

The Office Action stated that “[c]laim 1 is a canceled claim based on preliminary amendment filed 5/28/02 and again claim 1 is presented as amended claim in the preliminary amendment, the numbering of the claims is improper that canceled claim number is not part of the invention and can not be presented again.” Office Action at 3-4. The Applicant respectfully disagrees.

The Applicant filed a preliminary amendment dated May 13, 2002 (“Preliminary Amendment”), which the Office apparently received on May 28, 2002. In the Preliminary Amendment, the Applicant canceled claim 2, but not claim 1. Rather, the Applicant *amended* claim 1. *See, e.g.*, Preliminary Amendment at 3 (“Please *amend claim 1, cancel claim 2* and add new claims 3-36.” (emphasis added)), 10 (“With this amendment, *claims 1* and 3-36 *are pending*. Claim 2 has been canceled.”(emphasis added)), 3 (setting forth a clean version of claim 1), 12 (setting forth claim 1 with amendments highlighted).

Furthermore, the Applicant submitted a second preliminary amendment dated September 26, 2002. That amendment, however, did not make changes to the claims. Thus, the Applicant respectfully submits that claim 1 is pending in the application.

OBJECTION TO CLAIMS 3 AND 5

The Office Action objected to claims 3 and 5, stating that “[t]hese claims are rejected as improper because the subject matter presented in the claims does not further limits the previous that depends on.” Office Action at 4. Again, the Applicant respectfully disagrees for at least the following reasons.

Independent claim 1 recites:

1. A radio-frequency (RF) apparatus capable of transmitting radio-frequency signals, the radio-frequency apparatus comprising:
 - transmitter path circuitry, including:
 - a voltage-controlled oscillator circuitry, the voltage-controlled oscillator circuitry configured to generate an output signal having an adjustable frequency in response to first and second control signals ;
 - a first feedback circuitry, the first feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the first feedback circuitry configured to provide the first control signal to the voltage-controlled oscillator circuitry; and
 - a second feedback circuitry, the second feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the second feedback circuitry configured to provide the second control signal to the voltage-controlled oscillator circuitry,
- wherein the first control signal coarsely adjusts the frequency of the output signal of the voltage-controlled oscillator circuitry to a desired frequency, and
- wherein the second control signal fine tunes the frequency of the output signal of the voltage-controlled oscillator circuitry to the desired frequency.

Claim 3 depends on claim 1, and further limits the subject matter of claim 1 by reciting that “the frequency of the output signal of the voltage-controlled oscillator is adjusted during a first adjustment phase, and wherein the frequency of the output signal of the voltage-controlled oscillator is fine tuned during a second adjustment phase.” Thus, while claim 1 recites that the voltage-controlled oscillator circuitry is “configured to generate an output signal having an adjustable frequency in response to first and second control signals,” claim 3 limits claim 1 by reciting additional details of how the frequency adjustment occurs. More specifically, the frequency adjustment in claim 3 occurs in two adjustment phases, thus limiting claim 1’s recitation of “a voltage-controlled oscillator circuitry, the voltage-controlled oscillator circuitry configured to generate an output signal having an adjustable frequency in response to first and second control signals.”

Claim 5 depends on claim 4, which in turn depends on claim 3. Claim 4 limits the adjustment phases of claim 3 (quoted in substantial part above) by providing that “the first adjustment phase occurs before the second adjustment phase.” Claim 5 further limits the subject matter of claim 4 by reciting that “the first feedback circuitry adjusts the frequency of the output signal of the voltage-controlled oscillator during the first adjustment phase” and “the second feedback circuitry adjusts the frequency of the output signal of the voltage-controlled oscillator during the second adjustment phase.” Thus, claim 5 provides additional details of how the frequency adjustment occurs using the feedback circuits. The Applicant therefore respectfully submits that claims 3 and 5 constitute proper dependent claims.

DOUBLE-PATENTING REJECTION

The Office Action rejected claims 13-26 under the judicially created double patenting doctrine over claims 1-32 of U.S. Pat. No. 6,388,536. In response, the Applicant submits concurrently a terminal disclaimer. The Applicant respectfully submits that the terminal disclaimer overcomes the double-patenting rejection.

ANTICIPATION AND OBVIOUSNESS REJECTIONS

The Office Action: (a) rejected claims 1 and 3-36 under 35 U.S.C. § 102(b) as anticipated by U.S. Pat. No. 5,343,168 to Guthrie (“Guthrie”); and (b) rejected claims 13-26 as obvious pursuant to

35 U.S.C. § 103(a) over the combination of Guthrie and U.S. Pat. No. 4,998,077 to Nanni et al. (“Nanni”). For at least the reasons described below, the Applicant respectfully submits that the Office Action fails to set forth prima facie rejections of the claims.

Claim 1 recites in part: “a voltage-controlled oscillator circuitry, the voltage-controlled oscillator circuitry configured to generate an output signal having an adjustable frequency in response to first and second control signals.” Claim 1 further recites “a first feedback circuitry, the first feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the first feedback circuitry configured to provide the first control signal to the voltage-controlled oscillator circuitry,” and “a second feedback circuitry, the second feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the second feedback circuitry configured to provide the second control signal to the voltage-controlled oscillator circuitry.” The Applicant respectfully submits that Guthrie fails to teach at least one of the above limitations and therefore fails to anticipate independent claim 1 and dependent claims 3-36.

More specifically, the Office Action asserts that coupler 28, SSB mixer 30, and phase detector 22 teach the claimed “first feedback circuitry, the first feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the first feedback circuitry configured to provide the first control signal to the voltage-controlled oscillator circuitry.” The Applicant respectfully disagrees. But even if one assumes for the sake of the argument that the Office Action is correct, Guthrie fails to teach at least the claimed “second feedback circuitry, the second feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the second feedback circuitry configured to provide the second control signal to the voltage-controlled oscillator circuitry.”

The Office Action asserts that certain passages of Guthrie teach the claimed “second feedback circuitry, the second feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry, the second feedback circuitry configured to provide the second control signal to the voltage-controlled oscillator circuitry.” *See* Office Action at 6-7 (citing Guthrie at col. 4, lines 52-65, and fig. 1). The cited passage in Guthrie states in its entirety:

The output mixer 32 is operative to sum the frequency of the coarse tuning source 36 with the frequency of the VCO signal to translate the VCO signal upwardly, in the direction opposite the translation of the comb spectrum by the input mixer 18. The upward translation of the spectrum regains the value of the frequency of the selected comb spectrum signal at the output terminal 34, apart from the relatively small offset of the fine tuning frequency of the source 38. Adjustment of the value of frequency of the coarse tuning source 36 serves to adjust the amount of translation of the comb spectrum frequencies outputted by the comb generation circuit 12, thereby to select a specific value of the comb spectrum frequencies to be captured by the passband of the selector 16.

Guthrie, col. 4, lines 50-65. The Applicant respectfully submits that nothing in the cited passage teaches a “second feedback circuitry being responsive to the output signal of the voltage-controlled oscillator circuitry” that is “configured to provide the second control signal to the voltage-controlled oscillator circuitry.” In fact, the word “feedback” does not appear anywhere in the passage. The Office Action similarly puts misplaced reliance on Guthrie’s figure 1. Guthrie fails to show two feedback circuits that are each configured to provide a respective one of first and second control signals to a VCO.

Claims 3-12 depend ultimately on claim 1 and therefore include its limitations. Because Guthrie fails to anticipate claim 1 for at least the reasons articulated above, it fails to anticipate claims 3-12. The Office Action relies on the rejection of claim 1 to reject independent claim 27. For at least the reasons articulated with respect to claim 1, Guthrie fails to anticipate claim 27 (and claims 28-36, which ultimately depend on claim 27).

As noted above, the Office Action purports to reject claims 1 and 3-36 as anticipated by Guthrie. *See* Office Action at 6 (“Claims 1, 3-36 are rejected under .”). The Office Action, however, fails to address anticipation rejections of claims 13-26. *Cf. id.* at 6-10. Rather, the Office rejects claims 13-26 as obvious over the combination of Guthrie and Nanni, as noted above. *See id.* at 10-13. Thus, the Office Action fails to set forth a *prima facie* anticipation rejection of claims 13-26. If the Office wishes to rely on Guthrie, the Applicant respectfully requests a more detailed description of how Guthrie teaches the claimed limitations of each of claims 1 and 3-36.

Furthermore, as noted above, the Office Action rejected claims 13-26 as obvious over the combination of Guthrie and Nanni. For at least the reasons provided here, the Applicant again respectfully disagrees.

The Office Action asserts with respect to claim 13: “Claim 13. Guthrie discloses all limitation as explained above in claim 1.” Office Action at 10. As noted above, the Applicant respectfully submits that Guthrie fails to anticipate claim 1. Furthermore, the Applicant cannot understand the relevance of the purported anticipation of independent claim 1 to the obviousness rejection of independent claim 13. Claims 1 and 13 have different limitations and therefore different scopes. The Office bears the initial burden of setting forth a rejection of the claims (or allowing them). The Office Action summarily mentions the asserted rejection of claim 1, but does not provide any discussion or details of why that rejection pertains to the obviousness rejection of claim 13. Thus, the Office Action fails to set forth a prima facie obviousness rejection of independent claim 13 (and dependent claims 14-26, which depend ultimately on claim 13 and therefore include all of its limitations).

In sum, the Applicant respectfully submits that the Office Action has not set forth a prima facie rejection of the claims for at least the reasons set forth in this paper, and that the terminal disclaimer overcomes the double-patenting rejection. Accordingly, the Applicant respectfully requests allowance of the pending claims.

CONCLUSION

In view of the remarks above, the Applicant respectfully submits that the claims are in allowable condition for at least the articulated reasons. Consequently, favorable reconsideration and prompt issuance of a Notice of Allowance is respectfully requested. No fee is believed to be due. Should any fees (with the exception of the fee for the extension of time) under 37 CFR §§ 1.16-.21 be required for any reason relating to the enclosed materials, however, the Commissioner is authorized to deduct such fees from Deposit Account No. 10-1205/SILA:075.

The examiner is invited to contact the undersigned at the phone number indicated below with any questions or comments, or to otherwise facilitate expeditious and compact prosecution of the application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'MR Peterson', written over a horizontal line.

MAXIMILIAN R. PETERSON
Registration No. 46,469
Attorney for Applicant

O'KEEFE, EGAN & PETERMAN, L.L.P.
1101 Capital of Texas Highway South
Building C, Suite 200
Austin, Texas 78746
Voice: (512) 347-1611
Fax: (512) 347-1615